In the Claims:

Claim 1 (amended). An electronic component with shielding against stray electromagnetic fields, the electronic component comprising:

a ground potential terminal for receiving an external ground potential;

a semiconductor chip having a semiconductor substrate with an active upper side and a passive rear side having a surface area;

at least one ground lead disposed within said semiconductor substrate and having at least one contact area contacting said upper side of said semiconductor substrate for connecting to said ground potential terminal; and

a continuous electrically conductive buried layer having a surface area corresponding in size to said surface area of said passive rear side and entirely extending over said surface area, said buried layer disposed within said semiconductor substrate adjacent said passive rear side and connected to said ground potential terminal through said ground lead for providing a rear side shielding with said buried layer.